IN THE CLAIMS:

1. (original) A low dielectric constant polymer, comprising monomeric units derived from a compound having the general formula I

$$(R^1\text{-}R^2)_n\text{-}Si\text{-}(X^1)_{4-n}, \qquad I$$

wherein

each X^1 is independently selected from hydrogen and inorganic leaving groups,

R^2 is an optional group and comprises an alkylene having 1 to 6 carbon atoms or an arylene,

R^1 is a polycycloalkyl group and

n is an integer 1 to 3

2. (original) The polymer according to claim 1, wherein the organic content of the polymer is in the range of 30 to 70 wt.-%, preferably higher than 48 wt-%.

3. (original) The polymer according to claim 1, wherein R^1 is a polycyclic alkyl group having from 9 to 16 carbon atoms.

4. (original) The polymer according to claim 3, wherein R^1 is a cage compound.

5. (original) The polymer according to claim 4, wherein R^1 is adamantyl or diadamantyl.

6. (original) The polymer according to claim 5, wherein the adamantyl or diadamantyl is substituted with 1 to 3 alkyl substitutents, which optionally carry 1 to 6 halogen substituents.

7. (currently amended) The polymer according to ~~any of claims 1 to 6~~ claim 1, wherein the inorganic leaving group is selected from halogens.

8. (currently amended) The polymer according to ~~any of claims 1 to 7~~ claim 1, obtainable by homopolymerization of compounds of the formula I.

9. (currently amended) The polymer according to ~~any of claims 1 to 8~~ claim 1, which is obtainable by copolymerization of a compound of formula I with a compound of formula II

$$(R^3\text{-}R^4)_n\text{-}Si\text{-}(X^2)_{4-n}, \qquad II$$

wherein

X^2 is hydrogen or a hydrolysable group selected from halogen, acyloxy, alkoxy and OH groups,

R^4 is an optional group and comprises an alkylene having 1 to 6 carbon atoms or an arylene and

R^3 is an alkyl having 1 to 16 carbon atoms, a vinyl having from 2 to 16 carbon atoms, a cycloalkyl having from 3 to 16 carbon atoms, an aryl having from 5 to 18 carbon atoms or a polycyclic alkyl group having from 7 to 16 carbon atoms, and

n is an integer 1-3.

10. (original) The polymer according to claim 9, wherein R^3 is selected from alkyl groups having 1 to 6 carbon atoms, vinyl groups having from 2 to 6 carbon atoms, and aryl groups having 6 carbon atoms.

11. (currently amended) The polymer according to ~~claim 9 or 10~~ claim 9, wherein the molar ratio between monomeric units derived from compounds according to formula I and of formula II is in the range of 25:75 to 75:25.

12. (currently amended) The polymer according to ~~any of claims 1 to 11~~ claim 9, wherein R^1 or R^3, respectively, is directly bonded to the silicon atom.

13. (currently amended) The polymer according to ~~any of claims 1 to 11~~ claim 9, wherein R^1 or R^3, respectively, is bonded to the silicon atom via an alkylene chain selected from methylene, ethylene and propylene, or an arylene group selected from phenylene.

14. (original) The polymer according the claim 1, wherein the total sum dielectric components at 1 MHz is 2.50 or less, preferably 2.1 or less.

15. (original) The polymer according to claim 14, wherein the orientational dielectric constant of the polymer is 0.4 or less.

16. (currently amended) The polymer according to ~~any of the preceding claims~~ claim 1, wherein the oxygen content of the polymer is less than 15 atomic %.

17. (currently amended) The polymer according to ~~any of claims 9 to 16~~ claim 9, wherein the carbon content of the polymer is more than 25 atomic %.

18. (currently amended) The polymer according to ~~any of the preceding claims~~ claim 1, wherein the dielectric constant of the dielectric material after curing is 2.50 or less, preferably 2.30 or less.

19. (currently amended) The polymer according to ~~any of the preceding claims~~ claim 1, wherein the porosity of the dielectric material is less than 20 %, preferably less than 15 %.

20. (original) The polymer according to claim 1, wherein the average pore radius is less than 1 nm.

21. (original) The polymer according to claim 1, wherein the Young's modulus of the film is higher than 4 GPa after curing, in particular higher than 6 GPa.

22. (original) A low dielectric constant polymer, comprising monomeric units derived from a compound selected from the group

consisting of adamantyl trichlorosilane, adamantylpropyl trichlorosilane,3,5,7-trifluoroadamantyl trichlorosilane, 3,5,7-trifluoromethyladamantyl trichlorosilane and adamantylphenyl trichlorosilane.

23. (original) A method of forming a thin film having a dielectric constant of 2.5 or less, comprising

- hydrolyzing a first silicon compound having the formula I optionally with at least one second silicon compound having the formula II to produce a siloxane material;
- depositing the siloxane material in the form of a thin layer on a substrate; and
- curing the thin layer to form a film.

24 - 45. (canceled)

46. (original) Composite material useful as low-k materials in dielectric applications, said materials comprising copolymers formed by copolymerisation of at least one comonomer having the formula

$$(R^3\text{-}R^4)_n\text{-}Si\text{-}(X^2)_{4-n}, \qquad \text{II}$$

wherein

X^2 is hydrogen or a hydrolysable group selected from halogen, acyloxy, alkoxy and OH groups,

R^4 is an optional group and comprises an alkylene having 1 to 6 carbon atoms or an arylene and

R^3 is an alkyl having 1 to 16 carbon atoms, a vinyl having from 2 to 16 carbon atoms, a cycloalkyl having from 3 to 16 carbon atoms, an aryl having from 5 to 18 carbon atoms or a polycyclic alkyl group having from 7 to 16 carbon atoms, and

n is an integer 1-3,

with a silicon compound selected from the group of

a) silicon compounds having the general formula III

$$X^3{}_{3-a}\text{-}SiR^5{}_bR^6{}_cR^7{}_d \qquad \text{III}$$

wherein X^3 represents a hydrolyzable group; R^4 is an alkenyl or alkynyl group, which optionally bears one or more substituents; R^5 and R^6 are independently selected from hydrogen, substituted or non-substituted alkyl groups, substituted or non-substituted alkenyl and alkynyl groups, and substituted or non-substituted aryl

groups; a is an integer 0, 1 or 2; b is an integer a+1; c is an integer 0, 1 or 2; d is an integer 0 or 1; and b + c + d = 3; is hydrolyzed;

b) silicon compound having the general formula IV

$$X^4{}_{3-e}\text{-}SiR^8{}_fR^9{}_gR^{10}{}_h \qquad \text{IV}$$

wherein X^4 represents a hydrolyzable group; R^8 is an aryl group, which optionally bears one or more substituents; R^9 and R^{10} are independently selected from hydrogen, substituted or non-substituted alkyl groups, substituted or non-substituted alkenyl and alkynyl groups, and substituted or non-substituted aryl groups; e is an integer 0, 1 or 2; f is an integer e+1; g is an integer 0, 1 or 2; h is an integer 0 or 1; and f + g + h = 3; and

c) silicon compounds having the general formula V

$$X^5{}_{3-i}\text{-}SiR^{11}{}_jR^{12}{}_kR^{13}{}_l \qquad \text{V}$$

wherein X^5 represents a hydrolyzable group; R^{11} is a hydrogen or an alkyl group, which optionally bears one or more substituents; R^{12}

and R^{13} are independently selected from hydrogen, substituted or non-substituted alkyl groups, substituted or non-substituted alkenyl or alkynyl groups, and substituted or non-substituted aryl groups; i is an integer 0, 1 or 2; j is an integer i+1; k is an integer 0, 1 or 2; l is an integer 0 or 1; and j + k + l = 3,

with the proviso that copolymerisation is carried out using at least one comonomer having the formula II, wherein R_3 is polycyclic alkyl group having from 7 to 16 carbon atoms.

47. (canceled)

48. (currently amended) A method for forming a dielectric material having a dielectric constant of 2.6 or less, on a semiconductor substrate, comprising the steps of:

- introducing a monomeric, oligomeric or fully or partially polymerized deposition material on a semiconductor substrate by a spin-on or CVD method, said deposition material formed from a precursor material comprising a silicon-containing chemical compound having the formula I as defined in claim 1;
- forming a siloxane polymer film from the deposition

material on the semiconductor substrate by activating polymerization and densification reactions by a curing process; and

- thereby forming a material on the semiconductor substrate having a relative dielectric constant lower than 2.6.

49 - 53. (canceled)